



INTRODUCTION

The average home PC is used for far more than just surfing the web or word processing. Most are stuffed full of audio and video files, as well as photos and documents. This is fine if there's just one PC in the house, but if you have several it can be hard to share media files between them.

Windows Home Server aims to help. It's a server operating system based on Windows Server 2003, but with a friendlier interface and features aimed specifically at home users. If your PC runs Home Server, you can put all your files in one place and choose who on the network can access which type of file. It's also an invaluable backup tool, as the server operating system will automatically back up any PCs connected to it on its internal storage.

In *Computer Workshop* this month we show you how to install and configure Windows Home Server to help you get the most out of your home network.

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Install Windows Home Server

Looking for an easy way to share files on your home network? Chris Finnamore explains how to turn your PC into a server

Windows Home Server is an operating system, so it needs to be installed on a dedicated PC. The requirements, however, are modest. Microsoft recommends a Pentium 4 or Athlon 64 processor, or newer, and 512MB of RAM. However, a Pentium III-class processor would still be able to run it. Because it's a server, there's no need for a fancy graphics card.

The most important part of the server is the hard disk. Since it will be storing several computers' backups, as well as plenty of media files, you'll need a large disk. We recommend a 750GB model such as Hitachi's Deskstar 7K1000 HDS721075KLA330, which costs £106 including VAT from www.lamda-tek.com/componentshop. You should also consider fitting two identical hard disks in a RAID 1 configuration. In RAID 1, the two disks mirror each other, so if one hard disk fails the other still contains the data. You can then replace the failed drive, and the array will rebuild itself. Your motherboard's manual will tell you how to configure two disks as a RAID 1 drive. You'll also need a copy of the operating system. You can buy a version licensed for one server and up to 10 connecting PCs for £86 including VAT from www.ebuyer.com.

Windows Home Server is designed to run without a keyboard, mouse or monitor plugged in, and to be controlled over the network. However, if you have a power cut, when you turn the server back on it won't reconnect automatically to your home network and you'll need to log back on to the server to make it connect. For this reason it's worth keeping a keyboard, mouse and monitor plugged into, or at least near, the server so you can log back in.

INSTALLATION

As with Windows XP and Vista, you install Windows Home Server from a disc. You first have to go into your PC's BIOS to make sure it is set to boot from its optical drive first, so enter the BIOS, find the Boot menu and set it accordingly. Insert the installation disc and reboot your PC. If the hard disk is blank, the installer will load automatically. If you're replacing an existing operating system, look out for the 'Press any key to boot from CD' message and press a key when it appears. The installer will then load.

In the first screen, click the Next button. You'll be shown a list of drives installed in your PC. If you're using a SATA hard disk and it's not shown in the list, you may have to install the drivers for your SATA controller by inserting a CD or USB key with the drivers and clicking Load Drivers. Select the hard disk where you want to install the operating system and click Next. Be aware that Windows Home Server will erase all the data on your hard disk. Follow the steps to select your location, accept the licence agreement and enter your licence key. You'll be prompted to enter a name for your server, so call it something memorable to make it easier to find on your network. Once you've completed all the steps, click Start to begin the installation.

Once Windows Home Server is installed, you'll be shown the initial setup screen. The first step is to enter

a password. This is the password you'll use to access the server, so make sure it's one you'll remember. You can also enter a password hint. As with a normal Windows XP or Vista installation, you'll be asked if you want to turn on automatic updates. It's a good idea to turn these on, as all security updates will then be downloaded automatically, patching any security holes on the server. You'll also have the option to take part in the Customer Experience Improvement Program and to turn on automatic error reporting. Both of these will send anonymous data about your usage of Windows Home Server to Microsoft, so if you're not happy with this, turn off the options. The setup is now complete, so click the arrow to proceed.

The next step is to install your PC's network card driver. Windows Home Server is based on Windows Server 2003, so the Server 2003 driver is the best one to install. If you can't find the Server 2003 driver for your network card, Windows XP drivers should work. Because it's a server, you don't have to worry about other drivers, such as the display and audio drivers, as it doesn't need to play audio or display high resolutions.

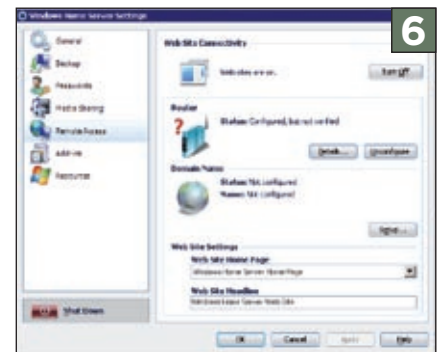
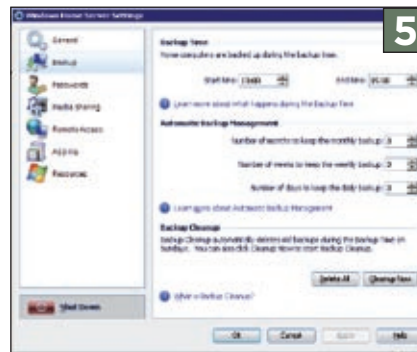
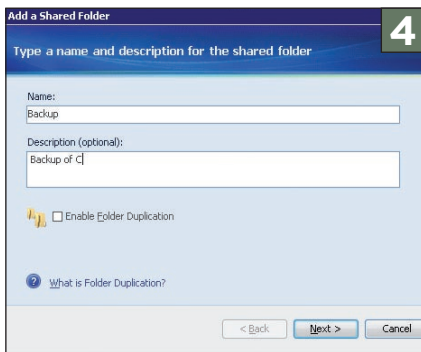
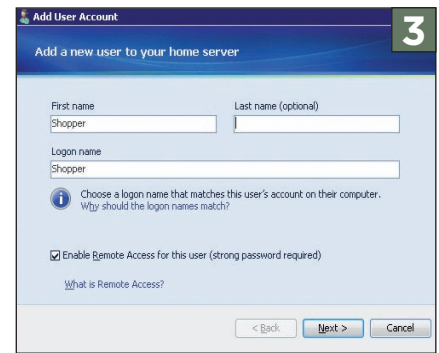
You may have to restart your computer after installing the drivers. When it restarts, press Ctrl-Alt-Delete to log on and enter Administrator as your username and your server password. Remember that passwords are case-sensitive. Finally, set the server's date and time by double-clicking on the clock at the far right of the start bar. It's important for the clock to be correct so scheduled backups run at the right time.

CONFIGURATION

1 Windows Home Server is designed to be used without a monitor, keyboard or mouse, so you must set up your other PCs to connect to it over the network. To do this, you need to install the Windows Home Server Connect software on each PC that needs to access the server. Insert the Windows Home Server Connector software CD. The installation program will run. Click Next and accept the licence agreement.

The software installs and looks for your server on the network. Once it's found it, enter the password you set during installation and click Next, then click Next once the connection is complete, and finally click Finish. Your PC will display a status icon in the System Tray, informing you of the status of your server. For example, if your server doesn't have anti-virus software installed, it will display a warning in the System Tray.

2 To access your server, double-click on the icon in the System Tray, then enter your server password in the new window. You're now in the Windows Home Server Console. This consists of several windows for each of the server's functions, which you switch between with the icons at the top. The Computers and Backup window shows you the PCs on your network set up to communicate with the server. The User Accounts window lets you specify which users can access the server's files. The Shared Folders window lets you create network shares, and the Server Storage window displays



all your server's hard disks and gives a breakdown of how each disk's space is used.

3 Next, you need to configure your User Accounts. User Accounts control who has access to which folders on the server and what kind of access they have. For example, you can give one person read and write access to the music folder but not the videos folder, or another read-only access to music and videos. You can also enable and configure a guest account, which anyone who connects to your home network can use.

Click on the User Accounts button and click OK to dismiss the information box that appears, then click the Add button. Enter a name and username for the new user. For simplicity's sake, make the username and password the same as the one each person uses to log on to Windows. You can also enable Remote Access for each user, which means they can access the server remotely over the internet. Remote Access requires a strong password, defined as at least seven characters long and consisting of lower- and upper-case letters and numbers. Click Next, then enter the password and click Next again. The final screen lets you define folder permissions for the shared folders on your network. Click the radio buttons to define what kind of access each user has to the server, then click Finish and Done.

By default, the Guest account is disabled and greyed out. To enable it, double-click on the icon and click Enable Account. Follow the steps to create a password and set permissions. The password is optional, but remember that anyone connected to your network can access the server when the Guest account is enabled.

4 If you want to create extra shared folders on top of the defaults or change user folder permissions, you'll need to use the Shared Folders window. To add a folder, click Add, give the folder a name and description and click Next. In the next screen, you can set permissions for the new folder for every User Account. If you need to change permissions for

any of the folders later on, double-click on the folder and click the User Access tab.

You'll now be able to access the server's shares from anywhere on your network. To find the server in Windows Vista, click Start then Network (My Network Places in Windows XP) and double-click on your server, which is represented by a computer icon. If you created a user and password to match your Windows one, you'll have immediate access. Otherwise, you'll need to enter the username and password.

Once you've entered your username and password, you'll be able to see the shared folders on your server. In Windows XP, double-click on My Network Places to access your shares.

5 You have to change some settings to fine-tune your server's setup. The most important things to set up are Backup and Remote Access. Click on the Settings button in the top right of the main window, then click the Backup icon in the Settings window that appears. You can now set the time of day when your PCs will be backed up to the server. If you leave the PCs connected to your server switched on all the time, you can set this to be in the middle of the night. If you turn them on only when you're at home, you should set the backup to occur when you're around. You can set a time frame for when backups are allowed to occur, so the backup will take place whenever a PC on your network is switched on during the backup period. Set the time frame you want, then click Apply.

6 Next you need to configure remote access, so you can access your server's files from anywhere. In the console, click on Settings then on Remote Access in the left-hand tree and click the Turn On button to enable it. The console will test your router to see if it can be automatically set up using UPnP to enable remote access to your server. By default, the router's firewall will be set up to block all incoming connections, so Home Server will automatically try to use UPnP to open the relevant ports to allow incoming connections. While Home Server is testing your router, you can click the Details

button to see the steps. If all the tests are successful, you will see a tick next to each step. If any display a warning symbol, you can click on the corresponding link to display a help page to solve the problem.

If your router doesn't support UPnP, you'll have to configure it manually to forward incoming connections on TCP ports 80, 443 and 4125 to your server. Assign your server a static IP address in its Network settings, and consult your router's manual to see how to forward ports.

Once you have your router set up to receive incoming connections on the correct ports, you need to set up the domain name you'll use to access the router. To set up a domain name, you need a Windows Live ID. If you have a Hotmail or MSN account you'll already have an ID, but if not go to www.hotmail.com or www.msn.com and register for a free account. Once you have a Live account, click Next, enter your Live username and password and click Next again, then accept the licence agreement and click Next again. Type in the prefix for your chosen domain name and click Confirm to see if it's already taken. If the domain name is available, you'll be able to continue. If not, you'll have to choose something different. Then click Finish.

You'll now be shown the web address where you can access your server; this will be in the format <https://<youname>.homeserver.com>. After you click Done, the console checks if it can connect to your server. Once it's done, click the Details button to see if your server is accessible. If there are any crosses, have another look at your router's ports. Once everything's configured properly, you can access your server's shared files from any PC connected to the internet by using your Homeserver.com web address. **CS**

Next month

BUILD A BLU-RAY PLAYER

We'll show you how to build the ultimate HD player